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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,396	07/22/2003	Ashish Agarwal	5760-12100	6815

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EXAMINER

SORRELL, ERON J

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/624,396

Applicant(s)

AGARWAL ET AL.

Examiner

Eron J. Sorrell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 0722 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/12/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 17-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 17-20 are not limited to tangible embodiments. In view of Applicant's disclosure, specification page 18, line 4-10, the carrier medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., a disk, RAM, ROM, etc.) and intangible embodiments (e.g., signals conveyed via a wireless link). As such, the claims are not limited to statutory subject matter and are therefore non-statutory. Applicant should amend the preamble of the claims to read a machine readable **storage** medium (emphasis added) storing instructions).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1,2,9,10,17, and 18 are rejected under 35

U.S.C. 102(e) as being anticipated by Midgley et al. (U.S.

Patent No. 6,625,623 hereinafter "Midgley").

4. Referring to system claim 1, method claim 9, and carrier medium claim 17, Midgley teaches a computing system comprising:

an application configured to initiate write transactions
(see lines 22-40 of column 16);

a first storage device configured to store data
corresponding to said write transactions (see lines 22-40 of
column 16); and

a replicator component configured to:

monitor said write transactions (see lines 10-52 of
column 19); and

modify system resources in response to I/O
characteristics of said monitored write transactions (see
lines 10-52 of column 19, note the I/O characteristics is

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being construed as the number of write transaction, Midgley teaches thousands can occur).

5. Referring to system claim 2, method claim 10, and carrier medium claim 18, Midgley the replicator is further configured to record data indicative of said characteristics (see paragraph bridging columns 7 and 8).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 3-8,11-16,19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Midgley in view of Rubin et al. (U.S. Patent No. 5,680,573 hereinafter "Rubin").

8. Referring to system claim 3, method claim 11, and carrier medium claim 19, Midgley teaches sending the write transactions to a first storage device (see lines 22-40 of column 16), and

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teaches the use of buffers for transferring data however Midgley is silent on the system comprising a memory pool and the replicator being configured to allocate buffers from the memory pool for the write transactions and modifying the size of the memory pool in response to the I/O characteristics.

Rubin teaches, in an analogous system, the above limitations (see paragraph bridging columns 8 and 9).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Midgley with the above teachings of Rubin. One of ordinary skill in the art would have been motivated to make such modification in order to more efficiently manage the memory in the system as suggested by Rubin (see paragraph bridging columns 2 and 3).

9. Referring to system claim 4 and method claim 12, Midgley teaches the system further comprises a log volume, and wherein the replicator is further configured to store the write transactions in the log volume (see lines 4-37 of column 17, wherein Midgley discloses a "journal file").

10. Referring to system claim 5 and method claim 13, Midgley teaches said application, first storage device, and replicator

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are within a first node of said system (see figure 1, item 28, and lines 23-40 of column 16), and wherein said system includes a second node with a second storage device coupled to said first node (see figure 1, item 16 and lines 54-63 of column 16)

wherein said replicator component is further configured to convey said write transactions to said second node (see lines 54-63 of column 16).

11. Referring to system claim 6, method claim 14, and carrier medium claim 20, Midgley fails to teach the second node includes a pool of buffers, each of which is configured to store a write transaction received from the first node, and wherein said replicator component is further configured to modify a size of said pool of buffers in said second node in response to said characteristics, however Midgley does teach the use of buffers for transfer data in the write transaction (see line 25-52 of column 9).

Rubin teaches, in an analogous system, the above limitations (see paragraph bridging columns 8 and 9)

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Midgley with the above teachings of Rubin. One of ordinary skill in the art would have been motivated to make such

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modification in order to more efficiently manage the memory in the system as suggested by Rubin (see paragraph bridging columns 2 and 3).

12. Referring to system claim 7 and method claim 15, Midgley teaches, the replicator is further configured to:

provide the recorded characteristics for display (see lines 25-65 of column 19);

provide guidelines for modifying resources of said system (see lines 25-65 of column 19); and

modify said resources based upon user input (see lines 25-65 of column 19).

13. Referring to system claim 8 and method claim 16, Midgley teaches the replicator component is configured to access the recorded data responsive to detecting an event (see paragraph bridging columns 7 and 8, note the recorded data is accessed when the journal file is transmitted to the backup server).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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The following documents are cited to further show the state of the art as it pertains to the applicant's invention:

U.S. Patent No. 6,901,582 to Harrison teaches a monitoring system for monitoring transactions of an application;

U.S. Pub. 2003/0188035 to Lubbers et al. teaches replicating data between two nodes on a network.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eron J. Sorrell whose telephone number is 571 272-4160. The examiner can normally be reached on Monday-Friday 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on 571-272-4083. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EJS
August 4, 2005



KIM HUYNH
PRIMARY EXAMINER
8/5/05